

Access DB# 18493

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: S. McClendon Examiner #: 75688 Date: 8/19/02
 Art Unit: 1711 Phone Number 305-555 Serial Number: 091761-025
 Mail Box and Bldg/Room Location: 434E09 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Polymer Compound, Method of producing the same, photosensitive compositions

Inventors (please provide full names): Shin Utsunomiya + Sergio Yamada

Earliest Priority Filing Date: 01/16/2001

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the polymer compound & claims 1 & the method of claim 3. attached
 thanks.

614
 0560-12P

STAFF USE ONLY

Searcher: <u>Ed</u>	Type of Search	Vendors and cost where applicable
Searcher Phone #:	NA Sequence (#)	STN <u>\$153.60</u>
Searcher Location:	AA Sequence (#)	Dialog
Date Searcher Picked Up:	Structure (#) <u>(3)</u>	Questel/Orbit
Date Completed: <u>10-30-02</u>	Bibliographic	Dr. Link
Searcher Prep & Review Time: <u>5</u>	Litigation	Lexis/Nexis
Clerical Prep Time:	Fulltext	Sequence Systems
Online Time: <u>60</u>	Patent Family	WWW/Internet
	Other	Other (specify)

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FILE 'REGISTRY' ENTERED AT 16:16:04 ON 30 OCT 2002
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STRUCTURE FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1
DICTIONARY FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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FILE 'LREGISTRY' ENTERED AT 15:43:59 ON 30 OCT 2002

L1 STR
L2 STR
L3 STR

FILE 'REGISTRY' ENTERED AT 16:02:27 ON 30 OCT 2002

L4 SCR 2043
L5 1 S L1 AND L2 AND L3 AND L4
L6 12 S L1 AND L2 AND L3 AND L4 FUL
SAV L6 MCC025/A

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L7 0 S L6

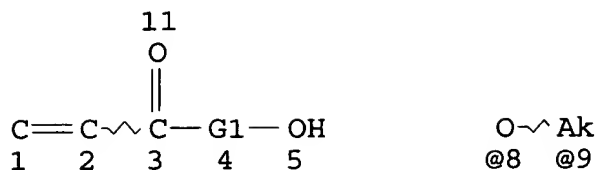
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L8 10 S L6

FILE 'REGISTRY' ENTERED AT 16:16:04 ON 30 OCT 2002

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L1 STR



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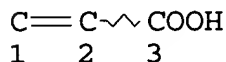
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STEREO ATTRIBUTES: NONE

L2 STR



NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

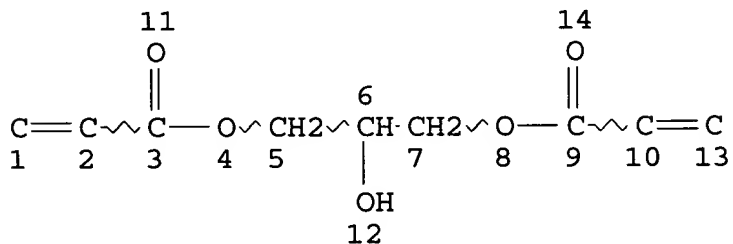
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STEREO ATTRIBUTES: NONE

L3 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L4 SCR 2043

L6 12 SEA FILE=REGISTRY SSS FUL L1 AND L2 AND L3 AND L4

100.0% PROCESSED 3693 ITERATIONS

12 ANSWERS

SEARCH TIME: 00.00.08

=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 16:16:19 ON 30 OCT 2002

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FILE COVERS 1907 - 30 Oct 2002 VOL 137 ISS 18

FILE LAST UPDATED: 29 Oct 2002 (20021029/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

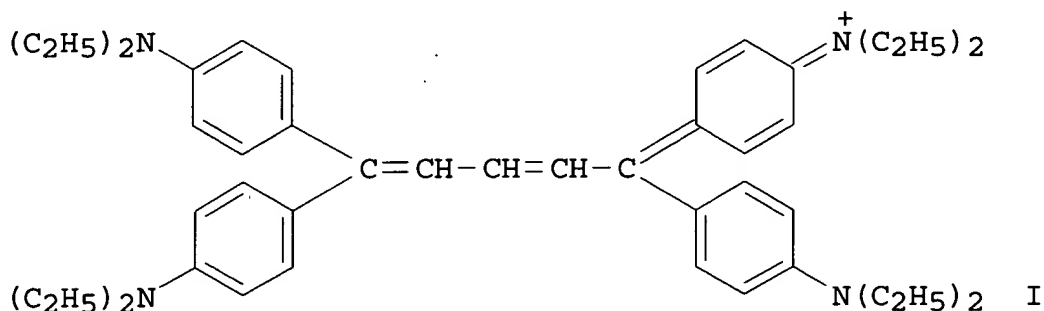
CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d l8 1-10 cbib abs hitstr hitrn

L8 ANSWER 1 OF 10 ZCAPLUS COPYRIGHT 2002 ACS

2000:865391 Document No. 134:30468 Photocurable polyisocyanate-based composition for coating. Matoba, Takao; Suzuki, Kenya; Yushima, Hajime (Kansai Paint Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000344856 A2 20001212, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-162173 19990609.

GI



AB The compn. comprises (A) a compd. having radical polymerizable unsatd. and active hydrogen groups, (B) a photoinitiator of visible photopolymn. initiator having max. absorption wave length in the visible optical territory and/or a photoinitiator having max. absorption wave length in the near IR radiation territory, (C) a photopolymn. initiator having max. absorption wave length in the UV ray territory, (D) a polyisocyanate. Thus, reaction acrylic acid soln. contg. tetrabutylammonium chloride and p-benzoquinone and a copolymer of styrene, MMA, iso-Bu methacrylate, Bu acrylate, glycidyl methacrylate, and 2-hydroxyethyl acrylate, and mixing with 2-hydroxy-3-acryloxypropyl methacrylate, TPA 100 (HDI polyisocyanate), I, Irgacure 819, di-Et thioxanthone, dibutyltin dilaurate gave a coating compn.

IT 311346-48-2

(photocurable polyisocyanate-based compn. for coating)

RN 311346-48-2 ZCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with Duranate TPA 100, ethenylbenzene, 2-hydroxyethyl 2-propenoate, 2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 2-methylpropyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

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CRN 134498-50-3

CMF Unspecified

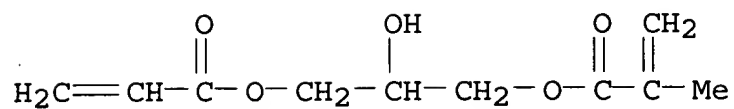
CCI PMS, MAN

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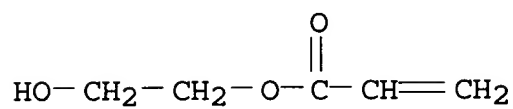
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CM 3

CRN 818-61-1

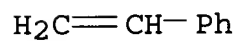
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CM 4

CRN 100-42-5

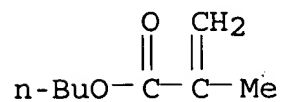
CMF C8 H8



CM 5

CRN 97-88-1

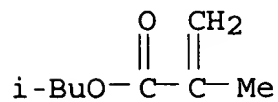
CMF C8 H14 O2



CM 6

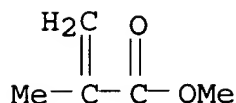
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CMF C8 H14 O2



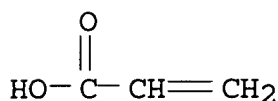
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CRN 80-62-6
CMF C5 H8 O2



CM 8

CRN 79-10-7
CMF C3 H4 O2



IT 311346-48-2

(photocurable polyisocyanate-based compn. for coating)

L8 ANSWER 2 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
2000:157971 Document No. 132:212746 Dental adhesive system. Matsunae, Kaori; Akahane, Shoji (GC Corporation, Japan). Ger. Offen. DE 19942923 A1 20000309, 16 pp. (German). CODEN: GWXXBX.
APPLICATION: DE 1999-19942923 19990908. PRIORITY: JP 1998-254037 19980908.

AB A dental adhesive system comprises a tooth surface-conditioning agent (an acidic aq. soln.) and a binder. The binder is a mixt. of (a) a fluoroaluminosilicate glass powder; (b) .gtoreq.1 unsatd. polymerizable org. compds., either with .gtoreq.1 CH2:CR1CO2 group (R1 = H, Me) or without an acidic group; (c) an acid; (d) water; and (e) a photopolymn. catalyst. The dental prosthetic and the tooth material can be firmly attached with the adhesive in a clin. simple procedure. The continuous release of F- from the adhesive assures the restoration of the tooth material, strengthening of the tooth structure, and the inhibition of secondary caries. Thus, a tooth surface-conditioning agent comprised citric acid 15, FeCl3 2, and distd. H2O 83 wt.%. A binder for use therewith was prepd. by mixing 2-hydroxyethyl methacrylate 25, triethylene glycol dimethacrylate 22.5, bis(2-methacryloxyethyl) 2,2,4-trimethylhexamethylenedicarbama te 10, distd. H2O 5, citric acid 5, and fluoroaluminosilicate glass powder 30 wt.% to form a paste which was combined with camphorquinone 1.0 and N,N-dimethylaminoethyl methacrylate 1.5 wt.%. After photopolymn. with visible light, the adhesive adhered to enamel and dentin with a strength of 15.3 and 13.8 MPa, resp.

IT 260391-90-0

(dental adhesive system)

RN 260391-90-0 ZCAPLUS

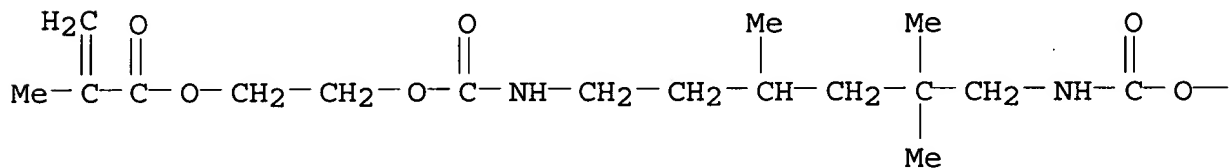
CN 11,14-Dioxa-2,9-diazaheptadec-16-enoic acid, 4,4,6,16-tetramethyl-10,15-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxy-1,3-propanediyl bis(2-methyl-2-propenoate), 2-methyl-2-propenoic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

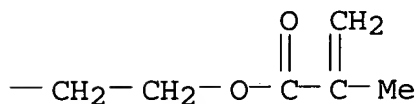
CRN 41137-60-4

CMF C23 H38 N2 O8

PAGE 1-A



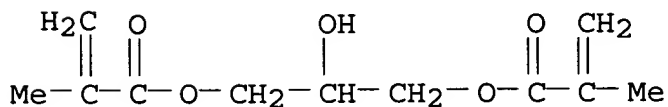
PAGE 1-B



CM 2

CRN 1830-78-0

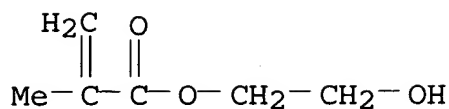
CMF C11 H16 O5



CM 3

CRN 868-77-9

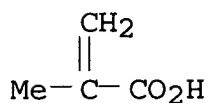
CMF C6 H10 O3



CM 4

CRN 79-41-4

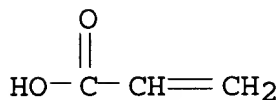
CMF C4 H6 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



IT 260391-90-0
(dental adhesive system)

L8 ANSWER 3 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
1999:690778 Document No. 131:291351 Radically polymerizable dental material. Rumphorst, Andre; Salz, Ulrich; Gianasmidis, Alexandros; Voelkel, Thomas; Moszner, Norbert; Rheinberger, Volker (Ivoclar A.-G., Liechtenstein). Eur. Pat. Appl. EP 951896 A2 19991027, 10 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (German). CODEN: EPXXDW. APPLICATION: EP 1999-250101 19990331. PRIORITY: DE 1998-19818210 19980424.

AB A dental filling or cement compn. contains .gtoreq.1 polymeric binder (polymerizable monomer, oligomer, prepolymer, macromonomer) and .gtoreq.1 filler contg. a 3-part redox initiator system. The latter comprises a homogeneous mixt. of (1) filler mixed with initiator (oxidant), (2) filler mixed with activator (reductant), and (3) filler alone which acts as diluent. The initiator and activator are not microencapsulated as in the prior art, and therefore do not require large mech. forces or long dissoln. times to initiate hardening. These components are premixed in a defined proportion and therefore do not require mixing by the user. Thus, a

statistical oligomer was prep'd. by heating acrylic acid 4 and mercaptoethanol 0.4 mol at 95.degree. for 60 min in the presence of azobis(cyanovaleric acid), and treating the product with glycidyl methacrylate 1.6 mol at 60.degree. for 2 days in the presence of hydroquinone mono-Me ether. A binder component was prep'd. by mixing this oligomer 24.7, hydroxyethyl methacrylate 27.9, glycerin 1,3-dimethacrylate 27.6, and deionized H2O 19.8 wt.%. A Ca Al fluorosilicate glass powder was silanized with .gamma.-methacryloxypropyltrimethoxysilane, and sep. portions were coated with either Bz2O2 (initiator) or benzylphenylbarbituric acid (activator). A filler mixt. was then prep'd. by mixing silanized ionomer glass 59.0, initiator-coated ionomer glass 8.0, activator-coated ionomer glass 6.0, YbF3 25.0, and fumed silica 2.00 wt.%. The binder and filler components were mixed in a ratio of 1:2.25 and allowed to harden. The hardened product had module of elasticity 3300-3800 MPa, bending strength 40-50 MPa, processing time 120 s at 23.degree., hardening time 360-420 s at 23.degree., and expansion 0.4% after storage for 4 wk in 0.8% NaCl soln. at 37.degree..

IT 246876-42-6P

(binder; radically polymerizable dental material)

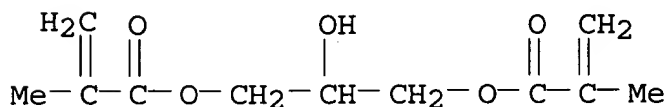
RN 246876-42-6 ZCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxy-1,3-propanediyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, 2-mercaptoethanol, oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 1830-78-0

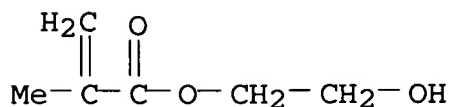
CMF C11 H16 O5



CM 2

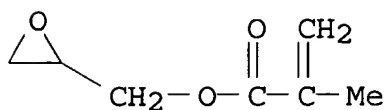
CRN 868-77-9

CMF C6 H10 O3



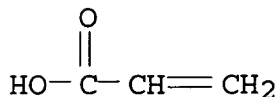
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CRN 106-91-2
CMF C7 H10 O3



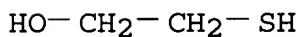
CM 4

CRN 79-10-7
CMF C3 H4 O2



CM 5

CRN 60-24-2
CMF C2 H6 O S



IT 246876-42-6P

(binder; radically polymerizable dental material)

L8 ANSWER 4 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
1989:555138 Document No. 111:155138 Urethane (meth)acrylate resins and their compositions. Takahashi, Eiji; Morikawa, Takao; Tsuda, Hideo (Nippon Soda Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01043516 A2 19890215 Heisei, 12 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1987-199280 19870810.

AB Title compns. with excellent soly. and curability, giving coatings with good adhesion, weatherability, hardness, and resistance to acid, base, solvent, and heat, useful for adhesives, inks, resists, etc., comprise A(UR1UX)nUR2UA [R1 = residues of diisocyanates contg. .gtoreq.50 mol% aliph. diisocyanates; R2 = diisocyanate residue; X = diol residues contg. .gtoreq.30 mol% glycerol monomethacrylate or glycerol monoallyl ether; A = residue of (meth)acryloyl-contg. alcs.; U = urethane bond; n = 1-150] with mol. wt. 700-50,000 and

radical polymn. initiators. Thus, 31.12 parts isophorone diisocyanate (I) and 27.75 parts glycerol monoallyl ether (II) were treated in dioxane in the presence of dibutyltin dilaurate at 80.degree. for 3 h to give a urethane prepolymer, which was stirred with 31.12 parts I and 29.99 parts 2-hydroxy-3-methacryloyloxypropyl acrylate to give a title resin (III) with mol. wt. 2300. Then, a glass epoxy substrate was spin coated with a compn. contg. 100 parts of 50% III in dioxane and 2.5 parts benzil di-Me ketal, dried 20 min at 80.degree., irradiated by UV, and postcured at 130.degree. for 30 min to give a coating with pencil hardness 9H, insulating resistance 4.2 .OMEGA. initially and 3.5 .OMEGA. after 65 h at 40.degree. and 95% humidity, and cross-cut adhesion 100/100 after 30 s in solder at 260.degree., 100/100 after 5 min in boiling Triclene, and 100/100 after 20 h in Cu plating soln. at 70.degree., vs., 6H, 2.6, 1.5, 0/100, 0/100, and 0/100, resp., for a coating prepd. using cyclohexanedimethanol instead of II.

IT 123088-03-9P 123088-04-0P

(prepn. of, chem.- and heat-resistant, for coatings and resists)

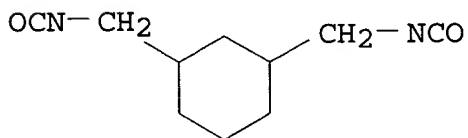
RN 123088-03-9 ZCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propyl ester, polymer with 1,3-bis(isocyanatomethyl)cyclohexane, .alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-hydroxypoly(oxy-1,2-ethanediyl) and 1,2,3-propanetriol mono(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 38661-72-2

CMF C10 H14 N2 O2

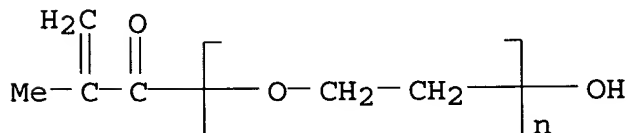


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CRN 25736-86-1

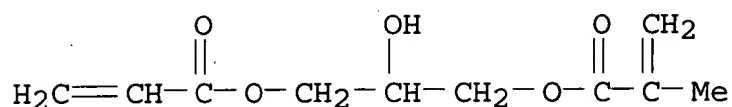
CMF (C2 H4 O)_n C4 H6 O2

CCI PMS



CM 3

CRN 1709-71-3
CMF C10 H14 O5

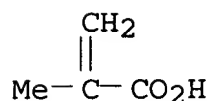


CM 4

CRN 50853-28-6
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CCI IDS

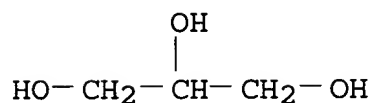
CM 5

CRN 79-41-4
CMF C4 H6 O2



CM 6

CRN 56-81-5
CMF C3 H8 O3

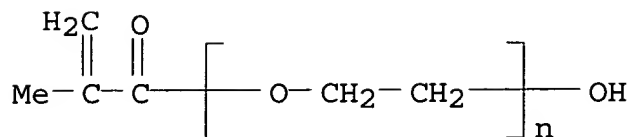


RN 123088-04-0 ZCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propyl ester, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane], .alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-hydroxypoly(oxy-1,2-ethanediyl), 1,2,3-propanetriol mono(2-methyl-2-propenoate) and 2(or 3)-(2-propenyloxy)-1,?-propanediol (9CI) (CA INDEX NAME)

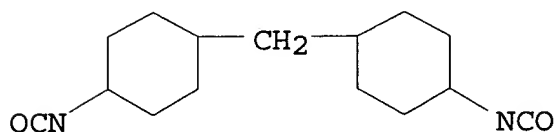
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CRN 25736-86-1
 CMF (C2 H4 O)_n C4 H6 O2
 CCI PMS



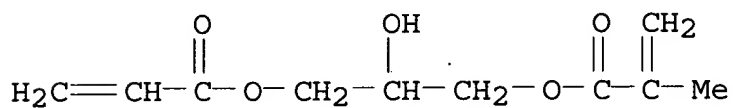
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CRN 5124-30-1
 CMF C15 H22 N2 O2



CM 3

CRN 1709-71-3
 CMF C10 H14 O5

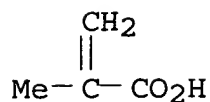


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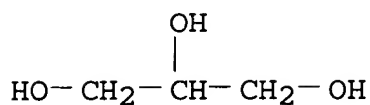
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CRN 79-41-4
 CMF C4 H6 O2



CM 6

CRN 56-81-5
CMF C3 H8 O3

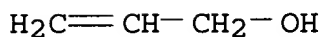


CM 7

CRN 25136-53-2
CMF C6 H12 O3
CCI IDS

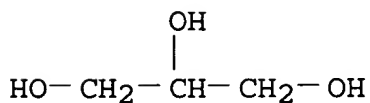
CM 8

CRN 107-18-6
CMF C3 H6 O



CM 9

CRN 56-81-5
CMF C3 H8 O3



IT 123088-03-9P 123088-04-0P

(prepn. of, chem.- and heat-resistant, for coatings and resists)

L8 ANSWER 5 OF 10 ZCAPLUS COPYRIGHT 2002 ACS

1988:592294 Document No. 109:192294 Electrodeposition coating
composition containing catalyst-carrying microparticles. Tsuchiya,

Yasuyuki; Nishikawa, Shigeo; Tobinaga, Kenshiro; Muramoto, Hisaichi (Nippon Paint Co., Ltd., Japan). Eur. Pat. Appl. EP 264834 A1 19880427, 18 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1987-115100 19871015. PRIORITY: JP 1986-246770 19861016; JP 1986-246771 19861016.

AB The title compn., providing coating films with good hardness, corrosion and solvent resistance, comprises aq. dispersions of film-forming base resins comprising oxidatively polymerizable resins and/or mixts. of active H-contg. polymers and blocked polyisocyanates, and dispersion-dispersible polymer microparticles carrying catalytically effective amts. of metal compds. or tertiary amines on the surface. Thus, a varnish [prepd. from Nisseki B 1500 (polybutadiene), Antigene 6C (N-methyl-N'-(1,3-dimethylbutyl)-p-phenylenediamine), maleic anhydride, Et₂NH, and HO(CH₂)₃OH] 125, another varnish [prepd. from Epo Tohto YD 014 (epoxy resin), acrylic acid, and hydroquinone] 75, 50% (solids) melamine resin 40, 50% phenolic resin 40, and nonionic surfactant 2 parts were mixed, stirred with a mixt. of 13 parts Et₃N, 707 parts H₂O, and 60 parts microparticles prep'd. from (methacryloyloxy)zirconium octoate, styrene, N-methyl-N-(vinylbenzyl)taurine, 2-hydroxyethyl acrylate, Me methacrylate, Bu acrylate, monobutyl maleate-glycidyl methacrylate adduct, Bu methacrylate, 2-hydroxyethyl methacrylate, acrylic acid, and ethylene glycol dimethacrylate. The mixt. was then elec. deposited on a Zn phosphate-treated steel plate, washed, and baked at 140.degree. for 0.5 h to give a coating showing pencil hardness HB, no change after rubbing 20 times with a gauze fabric impregnated with iso-BuCOMe, and low corrosion (240 h, 5% saline spraying); vs. 2B, poor solvent resistance, and high corrosion without the microparticles.

IT 117316-80-0

(microparticles, elec. deposited coatings contg., for good resistance to corrosion and rubbing)

RN 117316-80-0 ZCAPLUS

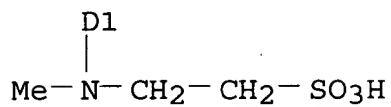
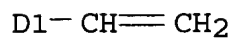
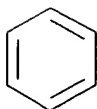
CN Zirconium, (2-methyl-2-propenoato-O)(octanoato-O)-, polymer with (Z)-butyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl 2-butenate, butyl 2-methyl-2-propenoate, 1,2-ethanediyl bis(2-methyl-2-propenoate), ethenylbenzene, 2-[(ethenylphenyl)methylamino]ethanesulfonic acid, 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, 2-methoxyethanol, methyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 117316-79-7

CMF C11 H15 N O3 S

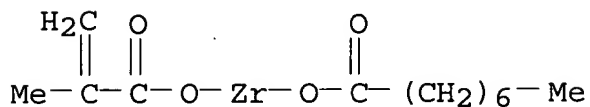
CCI IDS



CM 2

CRN 114571-40-3

CMF C12 H20 O4 Zr

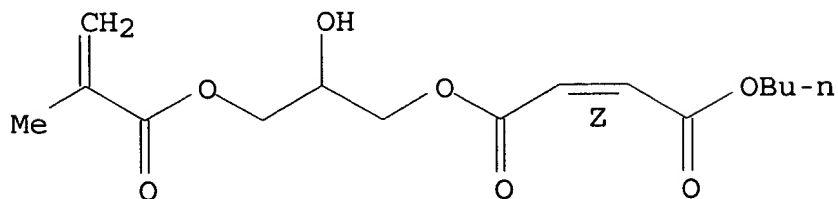


CM 3

CRN 113149-99-8

CMF C15 H22 O7

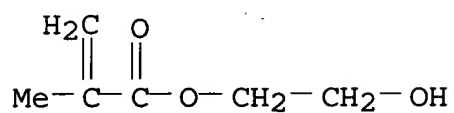
Double bond geometry as shown.



CM 4

CRN 868-77-9

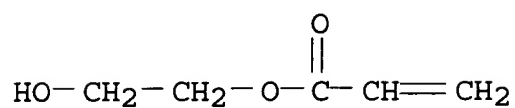
CMF C6 H10 O3



CM 5

CRN 818-61-1

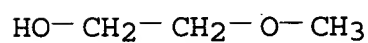
CMF C5 H8 O3



CM 6

CRN 109-86-4

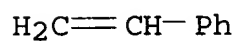
CMF C3 H8 O2



CM 7

CRN 100-42-5

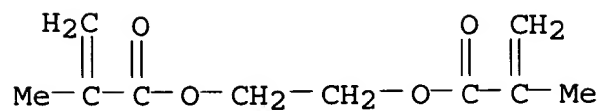
CMF C8 H8



CM 8

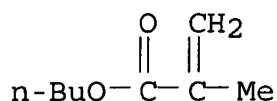
CRN 97-90-5

CMF C10 H14 O4



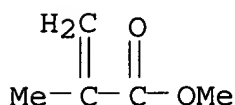
CM 9

CRN 97-88-1
CMF C8 H14 O2



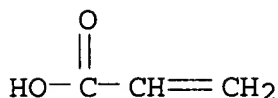
CM 10

CRN 80-62-6
CMF C5 H8 O2



CM 11

CRN 79-10-7
CMF C3 H4 O2



IT 117316-80-0
(microparticles, elec. deposited coatings contg., for good resistance to corrosion and rubbing)

L8 ANSWER 6 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
1988:114298 Document No. 108:114298 Core-shell composite acrylic resin particles. Miyazono, Tadafumi; Kashiwara, Akio; Ishikura, Shinichi (Nippon Paint Co., Ltd., Japan). Eur. Pat. Appl. EP 242235 A2 19871021, 14 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1987-303493 19870421. PRIORITY: JP 1986-90827 19860418.

AB Title resin particles useful in paints and coatings, comprising particulate crosslinked acrylic polymer with substantially chem. bonded linear acrylic polymer chains, are prepd. by emulsion polymg. compds. having .gtoreq.2 mono- and/or 1,1-disubstituted ethylenically unsatd. groups, monofunctional polymerizable non-arom.

monomers, and 1,2-di, 1,1,2-tri-, 1,1,2,2-tetrasubstituted ethylenically unsatd. compds. to obtain particles of a polymer contg. unsatd. groups, and graft polymg. with arom. compds. and optionally other monofunctional monomers. Thus, 430 parts Bu maleate was heated to 150.degree. in the presence of hydroquinone, and mixed with 373 parts glycidyl methacrylate for 90 min to give a mixt., 12 parts of which was mixed with Me methacrylate 64, Bu acrylate 20, and ethylene glycol dimethacrylate 40 parts. Adding the acrylic mixt. to a dispersion contg. amphoteric polyester stabilizer 20, dimethanolamine 2, and water 104 parts gave an emulsion, which was then added dropwise to 330 parts water at 80.degree. over 60 min together with initiator soln. Allowing the mixt. to stand at 80.degree. for 30 min, then slowly adding a mixt. of styrene 16, Bu acrylate 8, and Me methacrylate 16, and initiators 0.8 part gave crosslinked polymer particles readily dispersible in xylene, BuOAc, MEK, ethylene glycol, and Bu ether, forming 30%-solids compns. with viscosities 250, 230, 220, and 260 P, resp. Applying the org. solvent dispersions to glass plates and drying gave clear coatings.

IT 113149-98-7P

(core-shell composite particles, manuf. of, with good dispersion stability, for coatings)

RN 113149-98-7 ZCAPLUS

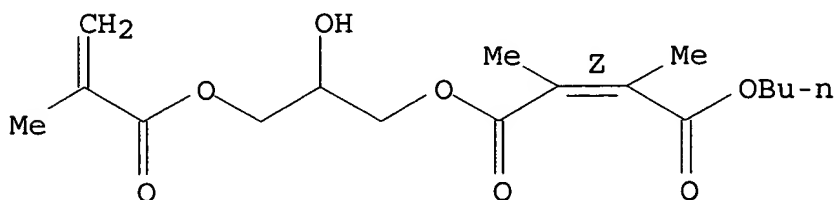
CN 2-Butenedioic acid, 2,3-dimethyl-, butyl 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester, (Z)-, polymer with butyl 2-propenoate, ethenylbenzene, 1,6-hexanediyl bis(2-methyl-2-propenoate), 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, graft (9CI)
(CA INDEX NAME)

CM 1

CRN 113149-97-6

CMF C17 H26 O7

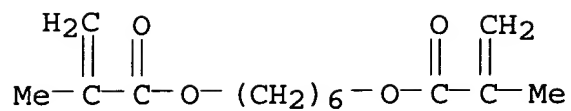
Double bond geometry as shown.



CM 2

CRN 6606-59-3

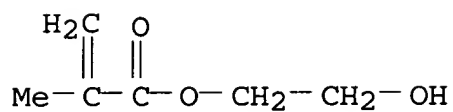
CMF C14 H22 O4



CM 3

CRN 868-77-9

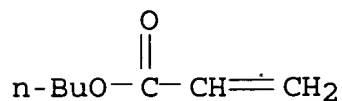
CMF C6 H10 O3



CM 4

CRN 141-32-2

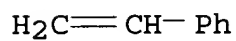
CMF C7 H12 O2



CM 5

CRN 100-42-5

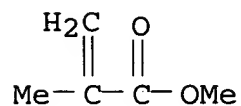
CMF C8 H8



CM 6

CRN 80-62-6

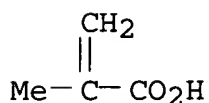
CMF C5 H8 O2



CM 7

CRN 79-41-4

CMF C4 H6 O2



IT 113149-98-7P

(core-shell composite particles, manuf. of, with good dispersion stability, for coatings)

L8 ANSWER 7 OF 10 ZCAPLUS COPYRIGHT 2002 ACS

1978:90438 Document No. 88:90438 Adhesives for anaerobic hardening. Gruber, Werner; Galinke, Joachim; Wegemund, Bernd (Henkel und Cie. G.m.b.H., Ger.). Ger. Offen. DE 2607961 19770901, 13 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2607961 19760227.

AB Bis(hydroxyethyl) carbonate (I) [55163-79-6] or a mixt. of I and HOCH₂CH₂OH [107-21-1] was esterified (1 mol) with two mol maleic anhydride (II) [108-31-6] and/or phthalic anhydride [85-44-9] to prep. dicarboxy compds. which were esterified with glycidyl methacrylate (III) [106-91-2] to prep. dimethacrylates. The dimethacrylates were used with monomers such as hydroxyethyl methacrylate (IV) [868-77-9] and methacrylic acid (V) [79-41-4] to prep. adhesives which hardened anaerobically and were used for bonding metal sheets. Thus, 0.2 mol I was esterified with 0.4 mol II and treated with 50.5 g III to prep. a dimethacrylate ester [64461-12-7] which was used (70 g) with IV 20, V 3, p-toluenesulfonyl hydrazide 1, N,N-dimethyl-p-toluidine 1, 70% cumene hydroperoxide in cumene 5, and 40% AcOOH in AcOH 1 g to prep. an adhesive which hardened between steel sheets to give tensile shear strength 245 kg/cm².

IT 64461-13-8

(adhesives, for anaerobic hardening)

RN 64461-13-8 ZCAPLUS

CN 5,8,10,13-Tetraoxaheptadeca-2,15-dienedioic acid, 4,9,14-trioxo-, bis[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl] ester, (Z,Z)-, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

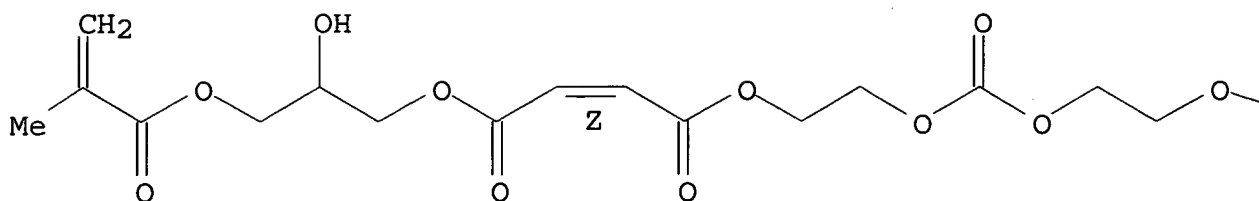
CM 1

CRN 64461-12-7

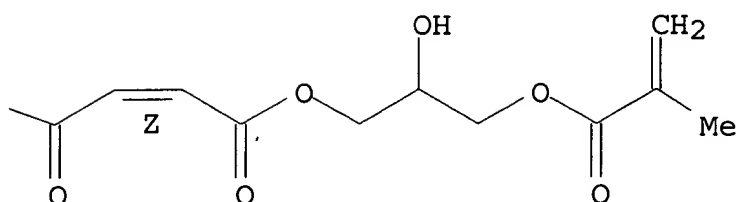
CMF C27, H34 O17

Double bond geometry as shown.

PAGE 1-A

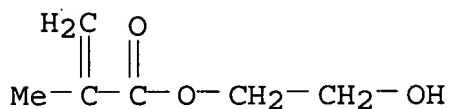


PAGE 1-B



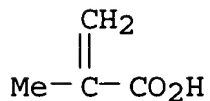
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 79-41-4
CMF C4 H6 O2



IT 64461-13-8
(adhesives, for anaerobic hardening)

L8 ANSWER 8 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
1978:7874 Document No. 88:7874 Adhesives for anaerobic hardening.
Gruber, Werner; Galinke, Joachim (Henkel und Cie. G.m.b.H., Fed.

Rep. Ger.). Ger. Offen. DE 2607960 19770901, 13 pp. (German).

CODEN: GWXXBX. APPLICATION: DE 1976-2607960 19760227.

AB EtO₂CN(CH₂CH₂OH)₂ (I) [32158-14-8] was esterified (1 mol) with 2 mols maleic anhydride (II) [108-31-6], phthalic anhydride [85-44-9]-II mixt., or cyclohexanedicarboxylic anhydride to prep. carboxy-terminated esters which were esterified with glycidyl methacrylate (III) [106-91-2] to prep. dimethacrylates. The dimethacrylates were used with methacrylic acid (IV) [79-41-4] to bond metals. Thus, 106 g I was esterified with 117 g II to prep. a carboxy-terminated ester which was treated with 48.6 g III to prep. a dimethacrylate ester [64462-31-3]. A mixt. of the dimethacrylate ester 70, hydroxyethyl methacrylate [868-77-9] 20, N,N-dimethyl-p-toluidine 0.5, 70% cumene hydroperoxide in cumene 5, 40% AcOOH in AcOH 1, and IV 3.5 g was used to bond steel sheets, giving tensile shear strength 235 kg/cm².

IT 64502-57-4

(adhesives, for metals, for anaerobic hardening)

RN 64502-57-4 ZCAPLUS

CN 2-Butenedioic acid (2Z)-, [(ethoxycarbonyl)imino]di-2,1-ethanediyl bis[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl] ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

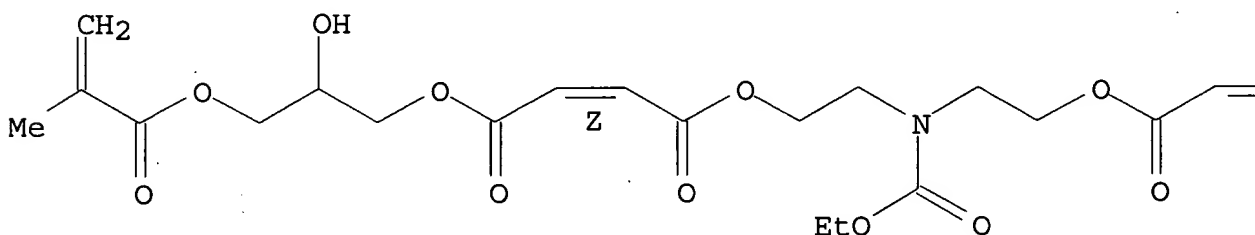
CM 1

CRN 64462-31-3

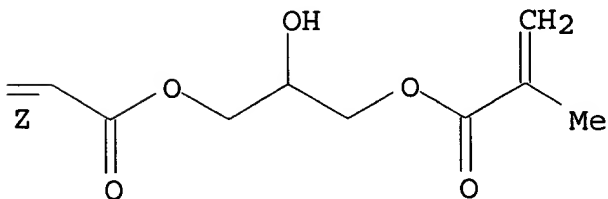
CMF C29 H39 N O16

Double bond geometry as shown.

PAGE 1-A

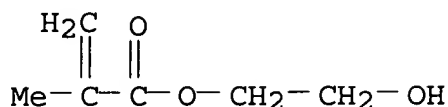


PAGE 1-B



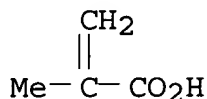
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 79-41-4
CMF C4 H6 O2



IT 64502-57-4

(adhesives, for metals, for anaerobic hardening)

L8 ANSWER 9 OF 10 ZCAPLUS COPYRIGHT 2002 ACS

1977:568778 Document No. 87:168778 Adhesives for anaerobic hardening. Wegemund, Bernd; Gruber, Werner; Galinke, Joachim (Henkel und Cie. G.m.b.H., Ger.). Ger. Offen. DE 2607962 19770901, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2607962 19760227.

AB HOCH₂CH₂OH [107-21-1], 1,4-butanediol [110-63-4], a mixt. of 1,4-butanediol and 2-butyne-1,4-diol [110-65-6], or similar diols were esterified (1 mol) with 2 mol maleic anhydride (I) [108-31-6] phthalic anhydride [85-44-9]-I mixt., or cyclohexanedicarboxylic anhydride [85-42-7], and the dicarboxy product was esterified with glycidyl methacrylate (II) [106-91-2] to prep. dimethacrylates which were used with monomers such as hydroxyethyl methacrylate (III) [868-77-9] and methacrylic acid (IV) [79-41-4] to prep. adhesives suitable for anaerobic hardening. The adhesives were esp. useful for bonding metals and gave bonds with good strength, heat stability, and flexibility. Thus, 156.8 g I was esterified with 49.6 g HOCH₂CH₂OH at 85.degree. and esterified further with 234 g II at 80.degree. to prep. a dimethacrylate ester [53562-93-9] which was mixed (70 g) with a methacrylate ester of 5,6-dihydrodicyclopentadienol 10, III 10, p-toluenesulfonyl hydrazide 0.5, N,N-dimethyl-p-toluidine 0.5, 70% soln. of cumene hydroperoxide in cumene 5, 40% soln. of AcOOH in AcOH 1, and IV 3 parts and used to bond steel sheets with tensile shear strength 270 kg/cm².

IT 64519-10-4 64520-75-8

(adhesives, for anaerobic hardening)

RN 64519-10-4 ZCAPLUS

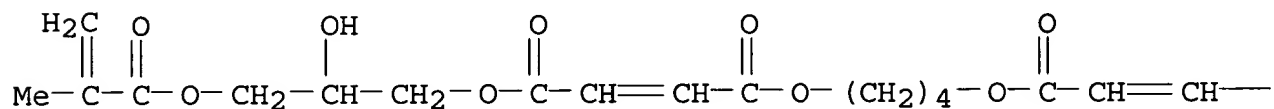
CN 2-Butenedioic acid (2Z)-, 1,4-butanediyl bis[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl] ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

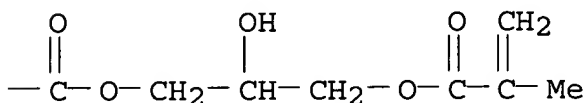
CRN 55554-71-7

CMF C26 H34 O14

PAGE 1-A



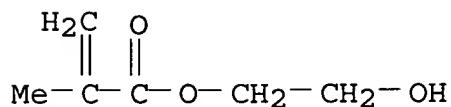
PAGE 1-B



CM 2

CRN 868-77-9

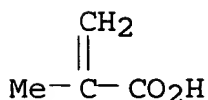
CMF C6 H10 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



RN 64520-75-8 ZCAPLUS

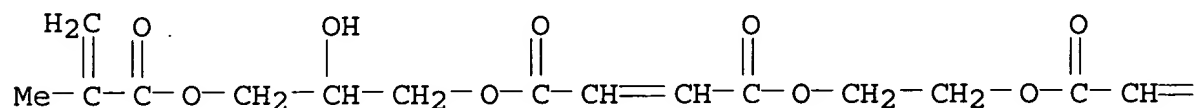
CN 2-Butenedioic acid (2Z)-, 1,2-ethanediyl bis[2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl] ester, polymer with
 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl
 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and
 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

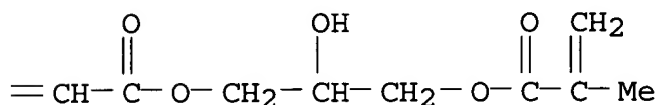
CRN 53562-93-9

CMF C24 H30 O14

PAGE 1-A



PAGE 1-B

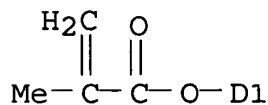
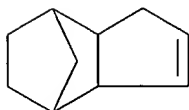


CM 2

CRN 31621-69-9

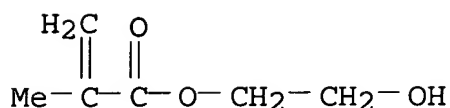
CMF C14 H18 O2

CCI IDS



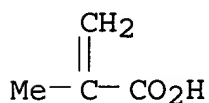
CM 3

CRN 868-77-9
CMF C6 H10 O3



CM 4

CRN 79-41-4
CMF C4 H6 O2



IT 64519-10-4 64520-75-8
(adhesives, for anaerobic hardening)

L8 ANSWER 10 OF 10 ZCAPLUS COPYRIGHT 2002 ACS
1975:87806 Document No. 82:87806 Entropically stabilized water base dispersions. Parker, Fred Walter (du Pont de Nemours, E. I., and Co.). U.S. US 3801524 19740402, 6 pp. Continuation-in-part of U.S. 3,729,439 (CA 79;19669c). (English). CODEN: USXXAM. APPLICATION: US 1972-316405 19721218.

AB Aq. dispersions which were useful as finishes for automobile and truck bodies were prep'd. from graft copolymers having graft segments which contain hydroxy-terminated acrylic monomers. Thus, an aq. dispersion of allyl methacrylate-butyl methacrylate-methyl methacrylate-acrylic acid-2-hydroxyethyl acrylate graft copolymer [40738-48-5] was prep'd. by refluxing a mixt. contg. Me methacrylate 700, Bu methacrylate 140, allyl methacrylate 10, anhyd. iso-PrOH (I) 350, BuO(CH₂)₂OH 75, and BuOH (II) 117 parts, adding a mixt. contg. Vazo initiator (azobisisobutyronitrile) 3, I 12, and II 3 parts and refluxing, adding a mixt. contg. Vazo initiator 1.5, I 7, and II 3 parts and cooling the resultant mixt. to 87.degree., adding a mixt. contg. 2-hydroxyethyl acrylate 103, acrylic acid 50, I 49, II 16, and Lupersol 11 (75% soln. of tert-Bu peroxy-pivalate in mineral spirits) (III) 1.5 parts, heating the resultant mixt. 1 hr at 87.degree., adding 15 parts I and 0.8 part III, cooling to 77.degree., and adding 15 parts I and 0.4 part III followed by 134 parts I and 500 parts demineralized H₂O.

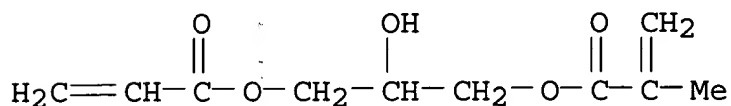
IT 52409-04-8
(graft, in aq. coatings)

RN 52409-04-8 ZCAPLUS
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with

2-hydroxyethyl 2-propenoate, 2-hydroxy-3-[(1-oxo-2-propenyl)oxy]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

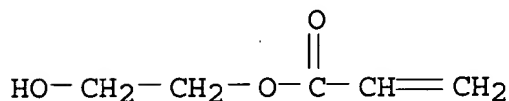
CM 1

CRN 1709-71-3
CMF C10 H14 O5



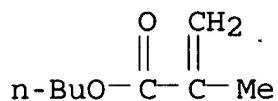
CM 2

CRN 818-61-1
CMF C5 H8 O3



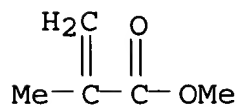
CM 3

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CM 4

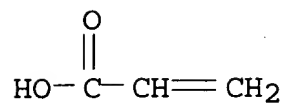
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CMF C5 H8 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



IT 52409-04-8

(graft, in aq. coatings)